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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/686,563	10/17/2003	Takahiko Tokumasu	243764US2	8979

22850 7590 12/30/2005

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ALEXANDRIA, VA 22314

EXAMINER
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TRAN, HOAN H

ART UNIT	PAPER NUMBER
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2852

DATE MAILED: 12/30/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

10/686,563

**Applicant(s)**

TOKUMASU ET AL.

**Examiner**

Hoan H. Tran

**Art Unit**

2852

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-34 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4, 7-12, 15-23 and 26-34 is/are rejected.
- 7) ☒ Claim(s) 5, 6, 13, 14, 24 and 25 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |  |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)            |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>01/04</u> . | 6) <input type="checkbox"/> Other: ____  |

**DETAILED ACTION**

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-4, 8-12, 16, 20-23, 27, 31 and 33 are rejected under 35 U.S.C. 102(b) as being anticipated by Shimura et al. [US 6,052,549]

Shimura et al. disclose an image forming apparatus comprising a detachable process cartridge [Fig.1] having an image carrier [11], a rotatable charging roller [12], a charging power source [18] for applying a voltage including an alternating current voltage superimposed on a direct current voltage to the charging roller [Col. 5, lines 15-25], and a cleaning means [16] for cleaning the surface of the image carrier; wherein the image carrier having a moving speed of 100 mm/sec and the alternating current voltage having a frequency of 1000 Hz [Col. 5, line 56 to Col. 6, line 6].

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Art Unit: 2852

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 18, 18, 29 and 30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shimura et al. in view of Bessho [US 6,496,673].

Shimura et al., as discussed above, disclosed the claimed invention except for the image carrier having a surface layer made of amorphous-silicon in which filler is dispersed.

Bessho discloses an image carrier [1] having a surface layer [1f] made of amorphous-silicon [Col. 8, lines 33-40] in which filler is dispersed [Col. 9, lines 9-15].

It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the image carrier disclosed by Shimura et al. with a surface layer made of amorphous-silicon in which filler is dispersed as taught by Bessho for the purpose of enabling charging by charge injection in order to achieve prevention of ozone generation or reduction of electric power consumption.

6. Claims 7, 15 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shimura et al. in view of Murata [US 6,041,209].

Shimura et al., as discussed above, disclosed the claimed invention except for the charging roller disposed opposite to the image carrier spaced by a minute gap.

Art Unit: 2852

Murata discloses an image forming apparatus having a charging roller [5] disposed opposite to the image carrier [4] spaced by a minute gap [Col. 6, line 59 to Col. 7, line 4].

It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the charging roller disclosed by Shimura et al. disposed opposite to the image carrier spaced by a minute gap as taught by Murata for the purpose of providing copied images of good quality even after successive copying of a large number of sheets.

7. Claims 17, 28, 32 and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shimura et al. in view of Kitazawa et al. [US 6,539,186]

Shimura et al., as discussed above, disclosed the claimed invention except for a cleaning means for cleaning the charging roller.

Kitazawa et al. disclose an image forming apparatus comprising a process cartridge [8] having a cleaning means [10] for cleaning a charging roller [9]. [See Abstract]

It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the process cartridge disclosed by Shimura et al. including a cleaning means for cleaning the charging roller as taught by Kitazawa et al. for the purpose of preventing the contamination of the charging roller.

***Allowable Subject Matter***

8. Claims 5, 6, 13, 14, 24 and 25 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Art Unit: 2852

***Prior Art***

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

- Ishiyama et al. [US 6,553,199] disclose a process cartridge.
- Handa [US 6,278,854] discloses a process cartridge.
- Kashihara [US 6,041,197] discloses a charging device.

***Contact Information***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hoan H. Tran whose telephone number is (571) 272-2141. The examiner can normally be reached from 8:30 AM - 5:00 PM Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Arthur Grimley can be reached at (571) 272-2136. The central office fax number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

HHT  
December 26, 2005



**HOAN TRAN**  
**PRIMARY EXAMINER**